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ABSTRACT

A study was conducted to devise a model for articulation between Shelby State Community College (SSCC), Memphis State University (MSU), and Tennessee State University (TSU). The study employed a literature review, case studies of all three institutions, a cross-case analysis, and interviews with personnel from MSU, TSU, and SSCC. The study sought to identify community college programs and courses that paralleled those of the state universities; differences and commonalities in the colleges' general education core curricula; and duplication of course content in university general education and community college-university parallel programs. Other research questions concerned other states' solutions to the articulation problem, and the establishment of a uniform articulation process. Based on study findings, an articulation model was created, including a common general education core curriculum for the Associate of Arts and Science and the Bachelor of Arts and Science degrees. The model also provides for a common course numbering system that facilitates use of standardized student information systems software, a definition of plus-two articulation, and provisions that students with associate degrees from the state's two-year colleges be fully admitted to its universities as juniors. Contains 57 references. (AJL)

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THE DEVELOPMENT OF AN ARTICULATION MODEL BETWEEN SHELBY STATE COMMUNITY COLLEGE AND TWO COMPREHENSIVE STATE UNIVERSITIES

by

Frank B. Heard

A Major Applied Research Project presented in partial fulfillment of the requirements for the degree of Doctor of Education

Nova University

February, 1989

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Abstract of a Major Applied Research Project Presented to Nova University in Partial Fulfillment of the Requirements for the Degree of Doctor of Education

THE DEVELOPMENT OF AN ARTICULATION MODEL BETWEEN SHELBY STATE COMMUNITY COLLEGE AND TWO COMPREHENSIVE STATE UNIVERSITIES

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February, 1989

Shelby State Community College (SSCC) is one of forty-six institutions comprising the State University and Community College System of Tennessee (SBR). The SBR enrolls large numbers of students each year who have educational objectives that are subject to change. Students who wish to transfer from two- to four-year institutions often lose credit, and are sometimes required to repeat course content already learned. This results in increased attrition, and loss of money and time for students, faculty, and taxpayers.

The purpose of this major applied research project was to devise an articulation model between SSCC, Memphis State University (MSU), and Tennessee State University (TSU). The project was conducted utilizing the case study

methodology, and was designed to bring definitive resolution to the following research questions:

1. Which academic programs and courses in community colleges are considered equivalent or "parallel" in universities within the SBR?

2. What are the differences and commonalities in the General Education Core Curriculums?

3. Does course content duplication exist in required courses in university parallel programs at community colleges and the general education core at universities?

4. How have other states solved this problem?

5. How could a uniform academic calendar, student information system software, and course numbering system facilitate articulation/transfer?

The methodology utilized was systematically related to the research questions posed, the results of which was the operational framework for the model derived. The review of literature was conducted to determine what others have done to resolve articulation problems. Elements of existing articulation programs that were compatible with the SBR system's academic, administrative, and technological framework were adapted for use in the model derived in this project.

Case records were established on TSU, MSU, and SSCC to analyze the characteristics of these institutions. A cross-case analysis was conducted on the case records to determine commonality and differences in their general education core curricula. Interviews were conducted with personnel from MSU, TSU, and SSCC to obtain additional information and clarification.

The model derived was based on information in the literature review, documents published by SBR and its institutions, interviews, meetings and conferences, and a comparative cross-case analysis. The model includes a common general education core curriculum for the Associate of Arts and Science, and the Bachelor of Arts and Science degrees. The model also includes a common course numbering system that facilitates use of standardized student information systems software. A definition of plus-two articulation, and provisions that SBR's associate degree holders be fully admitted to its universities in junior level standing are a part of the model.

It was concluded that serious fragmentation does exist among SBR institutions. It was also concluded that there is a need for a uniform systemwide articulation model, a set of policies and procedures to guide articulation and transfer processes, and computer-assisted articulation processes designed to assist in transfer credit delivery and evaluation.

The following recommendations were formulated for the SBR as a result of the study:

1. Adopt the Articulation Model derived in this study, including common course numbering, and mandate its use by all SBR institutions.

2. Appoint a Task Force on Articulation comprised of key personnel from selected SBR community colleges and universities to conduct further study and devise strategies to implement and improve the Model.

3. Appoint a Task Force to develop specific policies and procedures for implementing computer-assisted transfer processing.

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Chapter 1

INTRODUCTION

Higher education reform is on the national agenda and issues related to access, retention, and articulation are receiving more focus in many states across the country. Tennessee, long considered to hold education related issues in low priority, has recently emerged as a leader in higher education reform in many specific areas. These areas of educational reform to which Tennessee postsecondary education has given great priority are remedial and developmental education, secondary and postsecondary school collaboration, uniformity in the school year academic calendars, and a common computer software package for student information systems in colleges and universities of the State University and Community College System of Tennessee (SBR). In addition to these educational reforms, a movement was begun in Tennessee in the early eighties to ensure excellence and accountability in higher education through several initiatives: Performance Funding Program, Centers of Emphasis, Centers of Excellence, and Academic Scholars Program.

The Performance Funding Program in SBR was the first statewide program in the nation to provide incentives to colleges and universities for improving the quality of academic performance. Institutions are systematically

evaluated by standards of performance and may earn up to five percent additional funding beyond the institution's regular state funding. The Tennessee program continues to be viewed nationally as the most outstanding program of its kind.

The Centers of Emphasis and Centers of Excellence concept was chosen to emphasize and capitalize on the best programs the state has to offer. The Centers of Emphasis initiative focuses extensive resources on outstanding academic programs at Tennessee community colleges. Additionally, a new program establishing fifteen Campus Centers of Emphasis at two-year colleges and technical institutes was recommended and begun in 1986. Distinctively superior programs of instruction and public service have resulted from these centers.

There are thirty Centers of Excellence on the university campuses. The Centers of Excellence program originated in 1984. This program is designed to provide leadership to selected disciplines and to strengthen the partnership between business, government, and education. Nationally recognized distinguished scholars are recruited to fill each matched Chair of Excellence. This program is an integral part of Tennessee's successful efforts in bringing nationally-known scholars to its universities. The state has invested approximately $45 million in Centers during the first three years of the program. The Tennessee Academic Scholars Program is an endowment program that

provides $4,000 scholarships for outstanding Tennessee high school students to enroll in one of the state's public or private colleges or universities.

Unlike some states, Tennessee has two autonomous systems of public-supported higher education. There is the University of Tennessee System (UT) comprised of several regional universities strategically located in four major population centers of the state. There is also the SBR which is comprised of forty-six postsecondary institutions. These postsecondary institutions in the SBR system include six doctoral degree-granting universities, ten community colleges, four technical institutes, and twenty-six area vocational-technical schools. The two systems of higher education, SBR and UT, are independent but operate under the administrative oversight of the Tennessee Higher Education Commission (THEC). The THEC's major responsibility is to function as a coordinating board that ensures an equitable distribution of allocable public funds for higher education to each of the two systems.

Complementing the state's system of public higher education, Tennessee's private colleges, universities, and professional schools, such as Vanderbilt University, University of the South, Fisk University, LeMoyne-Owen College, and Meharry Medical College, are well-known by the state and the nation's academic communities. Thirty-eight private colleges and universities, accredited by the

Southern Association of Colleges and Schools, attract an enrollment of forty thousand students each year.

Tennessee's distinguished universities, both public and private, offer graduate programs in a wide array of disciplines. Faculty in these institutions, three law schools, four medical schools, and five schools of engineering contribute significantly to the education and professional resources of Tennessee.

The ten community colleges and four state technical institutes were established in response to a recognized need for improving and expanding higher education opportunities in Tennessee. The technical institutes provide two-year associate degrees and competency certificate programs in computer and engineering sciences, health occupations, and technologies that relate to many different careers. Community colleges offer academic degrees that are designed for transfer into four-year programs of higher education. Approximately fifty percent of the courses offered by the ten community colleges are designed to fulfill a vocational or technical training purpose. Community colleges and technical institutes are located in key areas throughout the state to provide greater access for all Tennesseans including business and industrial employees. The colleges and technical institutes are within fifty miles of any significantly large population center in the state.

A statewide system of twenty-six Area Vocational Technical Schools exists to address the occupational and

technical training needs of the citizenry, including employees of existing and prospective businesses and industries of the state. Vocational training prepares individuals for jobs, upgrades their skills, and retrains and cross-trains specifically to meet today's demand for advanced technology. Occupational training results in an improved standard of living for workers and greater productivity for Tennessee's businesses and industries. Each Area School is designed to serve postsecondary (adult) students, and certain schools also serve secondary students on a contractual basis. Courses are offered in the areas of agriculture, health occupations, home economics, office occupations, trade and industry, and special programs. Area School graduates are usually considered for entry-level employment in their respective occupations. These Area Schools are administered by the SBR and are coordinated by the THEC.

The institutions, programs, and issues related to the SBR system are the focus of this major applied research project. Although, as indicated above, Tennessee citizens have made great strides in the advancement of educational opportunity, access, and practice, there still remains serious unresolved and costly issues resulting from uncoordinated academic programs and fragmented articulation and transfer practices. These problems exist within and among SBR's colleges and universities and largely lie in the area of program overlapping, duplication of program content, and

ambiguity about level and transferability of courses and educational programs. There is an additional array of institutional policies that serve to exacerbate the problem.

Background and Significance

Since its establishment in 1962 as a unit comprising only six universities, the SBR has expanded to include the ten community colleges, the four technical institutes, and the twenty-six area vocational-technical schools. Enrollments in Tennessee's public colleges and universities exceed 150,000. In spite of the progressive movement toward excellence in educational programs and other meaningful advances, Tennessee's higher education institutions are not interdependent and do not complement each other. Their programs overlap with respect to content and program requirements, and there is no uniform mechanism to provide continuity within and among programs in the SBR's colleges and universities. If the total system could be viewed as a single entity through which students move, educational programs, admissions and transfer criteria, and issues related to retention and access would be designed to function as if all education were related.

Every year thousands of students apply for transfer from one of SBR's institutions to another. According to the State Information System Report (Fall, 1988:1), 3,823 such transfers occurred within the SBR system at the beginning of the Fall, 1988 term. Many encounter discouragement, endless

delays, and countless roadblocks. Frustration is the result and attrition is the outcome. The crux of the problem lies in the fact that there exists no uniform means among SBR institutions by which students can move efficiently from the community college to the university. A strong system-wide articulation agreement is needed to bring shape and form to a process that, so far, is a risky and sometimes educationally fatal course of action for many students. In the absence of a uniform system-wide articulation agreement, everyone concerned suffers. It is costly in time, money and learning effectiveness for the students, teachers, and taxpayers when students are required to repeat learning already accomplished. Well-coordinated articulation results in reduced redundancy and increased efficiency and effectiveness of the system. Good articulation is symbolic of a system built from the perspective of the people moving through it, making it function as "one system."

The specific purpose of this Major Applied Research Project was to develop a uniform articulation model between Shelby State Community College (SSCC), Memphis, Tennessee and two comprehensive universities within the SBR system. The two comprehensive universities are Memphis State University (MSU), Memphis, Tennessee and Tennessee State University (TSU), Nashville, Tennessee. These two comprehensive SBR universities were chosen because of the similarity in their missions, and because they serve the two highest populated cities in the state. For purposes of this

major applied research project, articulation may be defined as a systematic coordination between SBR community colleges and universities designed to ensure the efficient and effective movement of students among these institutions while guaranteeing the students' continuous advancement in learning. Although articulation is comprised of a broad range of processes and relationships, this major applied research project was focused on designing the mechanics of general education curriculum course and credit exchange, and the support systems that facilitate these processes within the SBR.

The critical issues relative to interinstitutional articulation in Tennessee primarily lie under the caption of barriers to synchronized postsecondary education. Major impediments to this synchronization within the SBR system appear to be a lack of agreement upon lower division course and program content, lack of uniform transcript evaluation procedures, and lack of a systematic transfer policy that would promote graduation at senior institutions without excess credit accumulation. The major critical issue, therefore, is the fragmentation that exists in articulation processes and procedures from institution to institution. It appears that, to some extent, each institution operates as if it were a separate, discreet entity with no logical relationship to any other institution. Currently, SBR institutions develop a separate articulation agreement with each receiving institution to which its students intend to

transfer. Some Tennessee community colleges already have articulation agreements that are designed to prevent loss of credit by students who make early decisions about transfer. Clearly the non-standardization of this process is a major barrier to the free and open exchange of credit from institution to institution throughout the SBR system, the results of which are all negative for transfer students. The loss of credits may vary considerably from institution to institution. At a recent regular quarterly meeting of the SBR (September 16, 1988), Board Member J. D. Johnson expressed profound concern for students who begin their programs in career studies and are later unable to pursue the baccalaureate degree without loss of credit. Board Member Arliss Roaden, on the same subject, specified lack of articulation as one of the major barriers to cost-effective postsecondary education delivery in the SBR system. Thomas J. Garland, Chancellor of the SBR System, also cited articulation as a major issue affecting effective regional and statewide planning and for the most economical delivery of services. Garland (SBR Meeting, 1988) stated that

> in the past two years I have conducted presidential searches at Nashville State and Tri-Cities State Tech. In both instances students served on the search committee, and I heard over and over again their concern with difficulty in transferring credit to universities.

These same remarks are echoed from students in the community colleges. Additionally, many community colleges may no longer be able to allocate sufficient human resources to

continue the development, modification, and implementation of multiple articulation agreements because of the growing size and importance of other functions.

Hodgkinson (1985:1) very accurately described the broader major issue of articulation explored in this project. He noted that almost everyone who works in education perceives it as a set of discrete institutions working in isolation from each other. For example, people working in nursery schools, day care centers, kindergartens, elementary schools, junior high schools, senior high schools, two-year technical and community colleges, four-year undergraduate colleges, universities with graduate programs, and post-graduate institutions view themselves as separate and apart. Hodgkinson (1985:1) states that

> people working in each of the above institutions have virtually no connection with all the others and little awareness of educational activity provided by the total.

He further states (1985:1) that

> it is assumed that if people can begin to see the educational system as a single entity through which people move, they may begin to behave as if all of education were related.

The gaps in the educational continuum resulting from this type of segregation among institutions is the issue that articulation is designed to address.

Research Questions

The final resolution to the complex multi-faceted problem of articulation in Tennessee's SBR system was

derived through a comprehensive investigation of the nature of the problem, an examination of the context emergence and current status of the problem, and the formulation of certain assumptions about the problem. Additionally, appropriate research questions had to be posed about the problem. The research questions that were posed for this major applied research project were designed to address these previously-expressed concerns and are listed as follows:

1. Which academic programs and courses in community colleges are considered equivalent or "parallel" in universities within the SBR?
2. What are the differences and commonalities in the general education core curriculums?
3. Does course content duplication exist in required courses in university parallel programs at the community colleges and the general education core at universities?
4. How have other states solved this problem?
5. How could a uniform academic calendar, student information system software, and course numbering system facilitate articulation/transfer?

The answers to the above questions contained a solid conceptual framework that was utilized to guide the formulation of solutions to the articulation problem addressed in this major applied research project. Additionally, a great deal of information relative to the entire spectrum of

processes involved in articulation and transfer mechanisms was found during the process of answering the research questions.

Definition of Terms

To reduce the likelihood of ambiguity in the language and terminology used for this major applied research project, the following terms are herewith defined:

Articulation: A systematic coordination between an educational institution and other educational institutions and agencies designed to ensure the efficient and effective movement of students among those institutions and agencies, while guaranteeing the students' continuous advancement in learning.

Associate Degree: An award certifying the completion of a two-year lower division undergraduate program of study.

Case: The primary unit of analysis, in this study an institution.

Case Narrative: A readable, descriptive picture of a unit of analysis containing all the information necessary to understand that unit.

Case Study: An empirical inquiry designed to investigate a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.

Case Record: A comprehensive, organized, primary resource package containing all of the major information needed for a case study or case analysis.

Common Course Numbering System: Standardized numerical course identifiers arranged according to course level and established to designate equivalent numbers for equivalent courses.

General Education Core Curriculum: The liberal arts courses that fulfill lower division general education requirements for a bachelors degree as defined and agreed upon among institutions.

Plus-Two Articulation: A formal agreement between two-year and four-year postsecondary institutions that associate degree holders will be accepted in transfer at junior level standing.

Transfer Student: Any enrolled student who has earned credit at another postsecondary institution.

Limitations

The articulation model developed in this major applied research project was limited to institutions accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS). It was further limited in applicability to schools operating under the rules, regulations, and practices promulgated by the SBR. The model developed in this project was limited in application to courses in the general education core curriculums of the institutions under examination, and may not be generalized to other specific academic curriculums or programs. A further limitation in the model developed was that there were no provisions for the treatment of credits earned in programs leading to two-year terminal, career, or vocational programs. Although articulation may encompass a broad range of processes and interinstitutional relationships, this project was limited to designing the mechanics of general education curriculum course and credit exchange, and the support systems that facilitate these processes within the existing framework of the SBR. The model derived in this project might have been different were it not for the fact

that some isolated articulation already existed within the SBR system.

Assumptions

The articulation model derived in this major applied research project was guided by certain assumptions. It was assumed that the SBR was greatly concerned with assuring the effective utilization of public postsecondary education resources. It was assumed that all postsecondary students would benefit from eliminating waste and unnecessary duplication in courses and content. It was further assumed that the articulation model developed in this project was compatible with the SBR's commitment to the promotion of diversity, innovation, and responsiveness to student and societal needs through statewide planning and coordination.

Chapter 2

REVIEW OF RELATED LITERATURE

Current Status of Articulation

An in-depth examination of the current status of articulation in higher education provides an interesting backdrop from which to develop a conceptual framework for posing solutions to existing problems. Articulation is not a new issue in the higher education arena. Moreover, it is not limited in scope to the courses listed in articulation agreements, rather, it is a multifaceted "process" that requires institution-wide involvement and cooperation between educational sectors. Articulation processes have existed in and among some institutions and systems of higher education for many decades, albeit ambiguous and fragmented. Although the subject of articulation has been the focus of a vast amount of educational literature, it remains an emerging topic of questionable importance on many higher education agendas. In recent years, however, many states and school systems have sought to bring standardization and coherence to the articulation process. Additionally, many commissions, state and national agencies, and education writers have encouraged cooperation and improved coordination among all educational levels and systems. Current

demands for accountability and cost-effective use of resources in America's institutions of higher learning have called attention to the need for a uniform systematic approach to educational programming among higher education sectors.

In a recent report of the Commission on Minority Participation in Education and American Life, American Council on Education (1988:1-2), it was written that

> the importance of understanding our educational systems as interactive and interconnected seems undisputed; educators have expounded this notion with great frequency and vigor. Yet as a nation we have not developed the value orientation or the concomitant structures required to increase the level of coordination and cooperation among our systems from the preschool to graduate school levels.
>
> It is patently obvious that we cannot increase the participation and performance of minority students in higher education without attacking the educational deficiencies that develop in their early years. Yet our system of schooling remains fragmented, characterized too often by over-specialization, territorial concerns, and competition for resources.

This, all too clearly, may be interpreted to verify the need for articulation and joint programming in America's institutions of higher learning to increase minority participation. But, more than that fact, this statement is significant in that it is written at a time when American higher education is experiencing the worst enrollment declines in its history. Hodgkinson (1985:1) states the case for articulation in a more profound way. He wrote that

> almost everyone who works in education perceives it as a set of discrete institutions working in isolation from each other. These institutions restrict the age range of their students:

Nursery Schools
Day care centers
Kindergartens
Elementary Schools
Junior High Schools
Senior High Schools
Two Year Colleges
Four Year Undergraduate Colleges
Universities with Graduate Programs
Post-Graduate Institutions.

> People working in each of the above institutions have virtually no connection with all the others and little awareness of educational activity provided by the total. Because of this, the school is defined as the unit, not THE PEOPLE WHO MOVE THROUGH IT. The only people who see these institutions as a system are the students--because some of them see it all.
>
> It is assumed that if people can begin to SEE the educational system as a single entity through which people move, they may begin to behave as if all of education were related.

The idea of readily achieving an "all one system" perspective in higher education today may be over-ambitious at this stage of America's development. However, incremental moves toward achieving interinstitutional cooperation through articulation is a realizable goal that is gaining great acceptance in American higher education. The momentum for such initiatives is steadily on the increase.

When Kintzer (1976c:1) discussed articulation and transfer, he stated that

> every year around 600,000 college students apply for transfer to a different institution. Many encounter discouragement, endless delays, and frustration. Where policies are flexible and the transfer machinery operates smoothly, the experience is gratifying.

At the time Kintzer made the above statement, thirty-nine states had already published articulation guidelines or transfer policies. Also, other influences were contributing

to changing policies--the increasing pressure from the federal government, the growth of upper division or upper level universities, and the increasing diversification of advanced placement allowances (Kintzer, 1976c:1). Since these earlier writings by Kintzer, emphasis on articulation declined and later underwent a resurgence. Throughout and subsequent to this era, much has emerged in the literature on articulation in American higher education. A great deal of the literature is the result of initiatives begun in several states.

State Articulation Initiatives

Volumes of materials covering the entire spectrum of the articulation and transfer issue have been published by the Florida State Department of Education (1978, 1979, 1980, 1981, 1982, 1983, 1984, 1986, 1988a, 1988b). Several other states have also published documents related to the transfer and articulation process. These states include Illinois (1978), South Carolina (1984), California (1973), Maryland (1975), Missouri (1985), and Arizona (Wright, 1986). One common theme appears to be present in the articulation and transfer issue from state to state: the guarantee that students transferring from one system or institution to the next will not be required to repeat equivalent courses. Additionally, one dominant procedure is commonly utilized in articulation practices in most states: the publication of course equivalency tables that specify courses meeting the

general education requirements at two- and four-year institutions. More recently, higher education professionals concerned with articulation in several states have concentrated on guidelines specifically for transfer in the Associate of Arts and Associate of Sciences categories (Wyoming, 1987, South Carolina, 1988). They also tend to foster the idea that transfer policies should reflect a concern for both the welfare of students and the maintenance of institutional standards. These professionals hold that transfer policies should be aimed toward the elimination of arbitrary and unnecessary barriers to the acceptance of legitimate course credits. To this end, the common set of courses that meet general education requirements at community colleges and universities in these states have been unanimously approved by procedures appropriate to each type of institution. Acceptance of the courses are without regard to the student's major; however, the receiving institution may require the student to fulfill all degree and major requirements, even if it means completion of more than the minimum number of total hours normally required for graduation. The South Carolina articulation document (1988:4) contains specific statements that transfer students are subject to the university catalog requirements in effect in the year that they entered the two-year institution. This practice was designed to prevent students from being subjected to new additional general education requirements that may be in effect at the universities upon transfer.

According to Boyer and McGuinness (1986:3-7), the states of Alabama, Alaska, and Colorado have also initiated articulation agreements for student transfers from two- to four-year institutions. These articulation initiatives have emerged from concerns for student success.

The Alabama Commission on Higher Education's Policy on Articulation (1987:1) contains the statement that

> it is important that the system of postsecondary education in Alabama provide every qualified student with the opportunity to pursue a program of study under the following conditions: (1) requirements for bachelor's degrees will be clearly stated and well publicized; (2) transfer or applicable degree credit will be no more difficult between and among institutions than within institutions; and (3) the integrity of each student's program of study will be guarded within appropriate parameters.

It is clear from the above statement that Alabama's concerns are for facilitating a smooth and orderly transition of students between and among its educational sectors without undue loss of credit. A close parallel to the Alabama statement is the assertion in Colorado (1988:1) that the purpose of its General Education Core Transfer Program is to prevent undue loss of credit from one educational sector to another. It contains the statement that

> a student attending one of Colorado's fifteen community/junior colleges can complete a common core of general education that will meet the lower-division general education requirements of most baccalaureate, degree-granting programs in Colorado's public supported four-year institutions.

Here again, it is noted that the central aim of such policy statements is to prevent undue loss of credit from one

educational sector to another that is often caused by students having to repeat content already learned.

All too often when community college students transfer to a four-year institution, they lose credits from either taking more courses than necessary or by taking courses that are not transferable. To reduce the likelihood of this costly situation, many institutions and higher education systems publish and annually update a course-by-course equivalency guide for the institution and its affiliate schools. Educators in other institutions and school systems have recognized the merit of plus-two articulation programs in which associate degree holders are accepted in junior level status without loss of credit. Colorado (1988:5) and Florida (1988a:7) contain policy statements that ensure this arrangement. As early as 1959, Florida set forth policies that would ensure course transferability between the sectors of education within its state. The first articulation agreement was designed to guarantee the transfer of all general education courses in a program defined by the community colleges. The universities were prohibited from requiring any further lower division general education courses if a student had completed a general education program at a community college. Because of the continual growing trend of transfer problems, a new agreement was promulgated between the two systems in 1971. This new agreement was designed to define the associate in arts degree as the transfer degree, reconfirm the general

education agreement, establish a common college transcript, provide for articulation research studies, implement a common calendar, establish the common course numbering system, and create the Articulation Coordinating Committee (Florida Department of Education, 1988b:4). Ideally, articulation agreements between educational institutions should contain specific exit-level competencies for student passage from one educational level to another, and thus avoid course repetition and facilitate credit acceptance. Unfortunately, these types of articulation agreements have been successfully effected in only a few instances involving a limited number of programs. Examples of successful articulation agreements in Florida include a mandate that associate in arts degree transfer students be classified as juniors upon transfer, and a common course numbering system assuring equal credit for community college and university courses.

The Higher Education Writer Perspective on Articulation

Higher education writers and researchers have for many years written about the need for and methods by which to achieve articulation and transfer agreements between institutions. Most notably, Kintzer (1973, 1975, 1976a, 1976b, 1976c, 1982a, 1982b) has provided extensive documentation of the need for strong articulation within and among America's higher education institutions and systems.

However, cooperation between institutions is essential for articulation to work smoothly. In this regard, Kissler (1982a:27) wrote, "changes should be initiated at both the community colleges and at the baccalaureate degree-granting institutions."

Kintzer has been on the forefront as an authority in documenting the emergence of state-wide articulation agreements. With the intent of revitalizing the study of educational articulation and transfer, Kintzer published a collection of essays (1982a:1-110). This document contains a description and assessment of the current status of transfer education, points to particular problems and concerns, and highlights specific articulation techniques, activities, and practices. At the same time, Palmer (1982:99-107) was compiling information on the status of the community college transfer function, the success of community college transfer students at four-year institutions, and experiential learn- ing and educational articulation. By carefully reviewing the writings of Kintzer and Palmer alone, one can readily gain a discernible and most credible insight into the mechanics of articulation.

Although some authors have treated the articulation and transfer phenomenon from a broader perspective, others have concentrated on various specific aspects of it. As previously mentioned, Palmer (1982:99-107) reviewed recent ERIC documents and journal articles dealing with the articulation and transfer process. His study was focused on

the status of the community college transfer function, the success of community college transfer students at four-year colleges, educational articulation, and experiential learning. The value of this work by Palmer lies mainly in the extensive bibliography that it contains and in its student tracking methodology. However, it is invaluable as a repository of information on the subject of comprehensive transfer articulation. In contrast, the Florida documents (1988a, and 1988b) were designed to provide a more specific coverage of problems and issues to anticipate relative to formulating articulation programs.

Kintzer (1976a, 1976b, and 1976c) focused on state activity to increase the transfer of academic credit between two- and four-year colleges and universities, and major trends influencing articulation and transfer. Additionally, these works contain an historical perspective on state government involvement in postsecondary articulation/transfer matters. One of Kintzer's earlier works (1973) was focused on the role of two-year institutions as middleman along the continuum of the educational structure.

There are numerous other documents, articles, and publications in print on the subject of articulation and transfer. These resources are all designed to address the complex problems associated with interinstitutional transfer of courses and credits, acceptance of community colleges' academic transfer degrees, and procedures to achieve curricular articulation.

Institutional Responsibility for Articulation

It is important to point out that articulation is not within the exclusive domain of academic affairs at institutions of higher learning. Rather, it is a complex process involving many other units within an institution. The complex nature of articulation ranging from a wide variety of processes pertaining to admissions, scheduling, orientation, and counseling to several other significant areas and activities is discussed by Kintzer (1973, 1975). In describing the distribution of articulation assignments, Kintzer (1973:2) states

> while centered on the student services division of an institution, administration of an articulation program involves other offices, including instruction and institutional relations.

Nevada (1982:10-33) contains specific information on the role of counselors, advisors, and other student services personnel with respect to transfer students. Additionally, Florida (1988a:41) embodies the idea that student services must be involved in maintaining an open communication link among institutions and from the institution to the students. The document contains the statement that

> the area of student support services plays a critical role in the articulation process. The mechanisms that allow the smooth transfer of credit and the development of progressive curriculum lay the foundation for articulation. Student support services is the conduit that conveys the mechanics to students, so articulation

> can take place. Counseling of students, whether career, personal or academic counseling has been and continues to be a priority, particularly with disadvantaged students, including minorities.

Indeed the subject of articulation is complex and broad, cutting across all aspects of education, from curriculum development to student services. The importance of academic affairs involvement, however, should not be underestimated since it is generally acknowledged that the curriculum "belongs" to the faculty. In support of this position Smith (1982:42) wrote

> although other divisions of the college participate in the necessary interchange of information, it is the instructional office alone that can utilize the articulation process as a dynamic element of college curriculum development.

Computer Support and Common Course Numbering Systems

Three very striking facts are evident from the literature: (1) the absence of strong articulation agreements in and among America's higher education institutions is an unnecessary cost that can be ill-afforded, (2) higher education practices in many states, with and without legislative support, have been improved by efforts to mitigate the articulation problem, and (3) by implementing workable articulation agreements, though sometimes difficult, everyone--students, teachers, administrators, and taxpayers--benefits.

Also evident from the literature is the idea that articulation policies should reflect a concern for both the

welfare of students and the maintenance of institutional standards. Articulation policies should be aimed toward the elimination of arbitrary and unnecessary barriers to the acceptance of legitimate course credits, and should also be designed to provide clear and concise mechanisms by which students may achieve stated educational objectives. To the extent to which this is true, it is imperative that some method of standardization of course, program, and content identifiers be established in and among higher education institutions and systems.

Efforts to improve transfer/articulation depend largely on the information systems utilized to support this process. College educators need to identify potential transfer students, gather information on their skills and deficiencies, if any, accumulate data on student progress through the educational program, and provide indices of the success students have in achieving objectives. Schinoff and Kelly (1982:1-11) wrote about improving academic advisement and transfer articulation through technology. This document was focused on a method of providing essential advisement information through a system of computer subroutines based on indexing of department and course numbers. Providing students with a list of transfer courses is required by the Florida statewide articulation agreement between the university and the community college systems. The listing of courses is generated by matching the information contained in the several college computer files with the graduation

requirements file for each degree program at the college. The essential framework for such computerized assistance in SBR institutions has been proposed by Heard (1987:21). The Heard document was focused on computer programming at SSCC designed to assist in academic advising and monitoring student progress toward stated educational objectives in each degree area. Both of these systems were designed to rely on course numbers/designations as the key structure for monitoring student progress, and could be easily generalized to include a common general education core curriculum of a total system of higher education in Tennessee to facilitate transfer articulation.

The way in which the State of Michigan proposed the utilization of computer resources to make information available to transfer students is described by Hendershot (1982:93-97). The proposal put into writing the need for a computer system of course equivalencies for all institutions to ease passage of students from two- to four-year institutions in Michigan. The operational framework for Michigan's computer-assisted model is similar to the one developed in Florida. Although the system is currently undergoing continual development and expansion, initial evaluation of the model may be interpreted to indicate that it is working well (Hendershot, 1982:95).

Professionals associated with the California Postsecondary Education Commission (1984:29) and the Florida State Department of Education (1988a:27) indicate that their

respective states have undergone thorough assessments and endorsed the need for some types of common course-numbering systems to facilitate articulation and transfer. The California Postsecondary Education Commission document (1984:5-13) contains numerous references to common course-numbering systems currently in use. This documentation includes information on American colleges and universities, commissions, higher education associations, and other agencies concerned with articulation and transfer. Additionally, proposals for electronic transcripting mechanisms, computerized data bases and other technological support to facilitate articulation between educational institutions and other agencies are contained in Florida (1988a:24-25), Hendershot (1982:93-97), and Schinoff (1982:1-12).

Computers can be utilized extensively to help in determining credit transferability. For example, a computerized network can be used to evaluate transcripts sent to four-year colleges from community colleges. The data base for such an endeavor would include all the colleges and universities in a given geographical area or system. For SBR, this type of endeavor is not only possible, but practical for three reasons: (1) As of Fall, 1988, all of the schools in the system have adopted a uniform semester academic calendar; (2) all of these institutions are required to implement a uniform student information system software package; and (3) all of these institutions are

subject to somewhat uniform minimum admissions and satisfactory academic progress standards.

The California Postsecondary Education Commission's (1984) study of common course numbering systems was designed to assess the feasibility of promoting the transfer of community college students to four-year postsecondary institutions. The study was aimed at simplifying the identification of transferable courses and the specific disciplines and programs to which those courses were transferable. It was also designed to promote the development of a common method of course identification within each segment of public postsecondary education where there was a clear need for such a common method. Results of the study were intended to assist in identifying courses with comparable content, so that certain competencies could be expected upon completion of such courses. This study was commissioned by the California Legislature because of widespread concern about barriers to transfer from community colleges to the University of California and the California State University, particularly for Black, Hispanic, and other disadvantaged students. According to the California Postsecondary Education Commission (1984:1), the following issues were implied in the statute commissioning the study:

1. The extent to which a common course-numbering system in California would reduce problems of Community College transfer students in meeting baccalaureate

degree requirements in an efficient and timely fashion;

2. The feasibility of implementing or adapting a statewide common course-numbering system like that in place in Florida;
3. The cost of implementing such a system, including developmental and maintenance costs, and its likely cost effectiveness;
4. The alternatives to a uniform, statewide course numbering system, their feasibility, and cost; and
5. The ability of the University, the Community Colleges, and the State University to implement alternative systems and their potential support for these options.

Of all the states surveyed during the California study, only Puerto Rico and Florida had fully implemented a uniform statewide course-numbering system. The results of the study were interpreted to indicate that a uniform statewide system of course-numbering of the type utilized by Florida was unnecessary in California. Instead, it was decided that the California Articulation Number (CAN) System would be further developed and recommended for funding by the legislature. CAN is a cross-reference system designed to identify transferable lower-division, introductory, and preparatory courses commonly taught on two- and four-year campuses in California. It is comprised of a common, discipline-related prefix and one- or two-digit numbers for each of these

courses (California Postsecondary Education Commission, 1984:15). Although California did not adopt a uniform system of course-numbering (for reasons peculiar to that state), the fact that it did implement a system of quasi-standardization was deemed to be symbolic of the fact of its need.

California's CAN system began as a pilot project involving a dozen community colleges and five four-year institutions that were updating their articulation agreements and identifying the most commonly transferred courses in twenty-seven disciplines. The goal in CAN was to simplify the confusing multiplicity of course-numbering systems facing transfer students without requiring these institutions to abandon their own course numbers and titles. Since 1983, CAN has spread statewide on a voluntary basis under a flexible, mutually acceptable set of procedures for institutional participation, with no state funds specifically budgeted for the project. The CAN system is somewhat simple, but expandable. It is limited in that it is not a uniform course-numbering system and does not include all courses offered by any one institution. This fact alone makes it difficult, if not impossible, to fully utilize computer-assisted transfer/articulation mechanisms. Instead, CAN is presently limited to commonly transferred courses (California Postsecondary Education Commission, 1984:15).

The State of Florida, on the other hand, is under the jurisdiction of the Commission on Colleges of the Southern Association of Schools and Colleges as are SSCC, MSU, and TSU. A computer-assisted common course-numbering system is utilized in Florida for all public higher education institutions. Moreover, there is greater similarity in the functioning of higher education in Tennessee and Florida than in California. For these reasons, the Florida common course-numbering system deserves additional exploration here.

A publication by The Florida State Department of Education (1988:26-27) indicates that

> the 1971 Articulation Agreement called for the creation of a Common Course Numbering System to facilitate the evaluation of transfer credit. For several years prior to 1971, the Florida Association of Collegiate Registrars and Admissions Officers (FACRAO) had been attempting to develop a voluntary Common Course Numbering System, but by the early 1970's, the Legislature wanted a mandatory system which would establish equivalent numbers for equivalent courses. The 1987 Legislature mandated that the State University System assign a consistent first digit in the four-digit course number in order to have standardization of the course levels. The first digit has been assigned by the colleges and universities, while the last three digits describe the course content and determine its equivalency.

Although Florida's system appears to have required a mandate from the Legislature, it may be inferred from the literature that it is on-line, working well, and has accomplished far more than was initially intended. The use of course equivalency systems or matrices appear to be a popular trend in the evolution toward ultimately establishing common course-numbering systems. These equivalency systems or

matrices can be coded, utilizing common descriptors, and computerized. Once computerized, a table-driven system of the type described in Heard (1987:1-21) and Schinoff (1982:1-12) can be designed to assist in the articulation and transfer process. Such systems are comprised of a computer programming subroutine that matches the degree or program requirements and the student's academic record as courses are selected during registration. Essentially, the computer is programmed to check prerequisite and corequisite course conditions on the student's transcript against the course specifications listed on a table of course requirements for the particular degree and major codes appearing on the student's record. Because uniform student information system software is utilized in SBR institutions, it would be practical to computerize articulation/transfer processes.

Common Course-Numbering at Two-Year Institutions

What action has been taken to address the problem of articulation among two-year institutions through common course-numbering? According to the California Postsecondary Education Commission's 1984 survey (California Postsecondary Education Commission, 1984:10-11), staff at community colleges and other types of public two-year institutions in several states have developed a common course-numbering system for their segment but have not yet extended it to other segments for articulation purposes. Personnel under

the Illinois Community College Board use a "Generic Course List" that enables them to match each specific course offered at any college to one of the generic courses by an identification number that includes Classification of Instructional Programs (CIP) codes developed by the National Center for Education Statistics (Malitz, 1981:7-33). Although the primary purpose of the generic course list was to provide consistent classification of similar courses for state funding and unit cost, the system is now in fact being used by some state universities for course articulation. Professionals in Michigan Community Colleges have developed a similar approach, also primarily for funding purposes.

Public junior colleges in Mississippi have a uniform course-numbering system for their academic transfer courses that does not yet include the senior institutions but is helpful in advising transfer students and evaluating their transcripts. Course equivalencies had been worked out with Mississippi State University and the University of Mississippi and printed in their catalogs in the 1970s, but the practice has now stopped because of turnover in personnel. Professionals at Alabama Community Colleges are attempting to use a similar approach to common course-numbering within that segment to improve articulation with four-year institutions but will not include them in articulation agreements at this time.

Area Technical Community College personnel in Nebraska are working on a common course-numbering system in

response to funding formula considerations. Nebraska's system is expected to serve as a definitive means of ascertaining course comparability and perhaps even describing discipline competencies. The system does not include either the other public community colleges or four-year institutions, although students are now transferring from the technical colleges to the latter with little difficulty.

The state system of sixteen technical colleges in South Carolina have a common course-numbering system that does not extend to other types of institutions. However, the system has entered into an agreement with the four-year institutions for the transfer of students in its Associate in Arts and Associate in Science programs. Unilateral transfer agreements with single four-year institutions have been developed in some of the technical colleges.

The Wisconsin Board of Vocational, Technical, and Adult Education operates what is probably one of the oldest common course-numbering systems in American postsecondary education. This system was developed in the 1950s with a grant from the IBM Corporation to the Milwaukee Vocational-Technical School to develop a taxonomy for occupational education. The system applies to both courses and programs and utilizes the concept of instructional areas identified with occupational disciplines. No attempt has been made to correlate course or program numbers with the University of Wisconsin System's course numbers. This is because the

Vocational, Technical, and Adult Education system is based on occupational education rather than the transfer function.

Articulation in Tennessee

As previously stated, SBR (State University and Community College System of Tennessee) does not publish a system-wide articulation document; nor does it publish standardized policies and procedures for the treatment of courses in transfer from one institution to another. A review of the policies and procedures promulgated by SBR resulted in the conclusion that there are no official policies or procedures regulating the transfer of credits from two- to four-year institutions. However, regulations governing the content of the general education core curriculum for certain degree categories are set forth in policy. These requirements are discussed below, and have been utilized as essential elements of the model derived in this project.

The comprehensive set of guidelines relative to degree requirements and transfer opportunities at SBR institutions may be found in several sources. Some of these guidelines are general and may be found in policy promulgated by the SBR for all universities. Other information relative to curricular and transfer requirements may be found in the catalogs of each respective institution. Other practices relative to transfer and articulation are a matter of unwritten procedures peculiar to each institution that

are designed to allow for wide latitude in the handling of transfer credits.

SBR Policy Number 2:01:00:00, subject: Policy on Degree Requirements, is the primary document utilized by system institutions to guide articulation matters. It contains the statement that

> the State Board of Regents acknowledges that each institution in the State University and Community College System of Tennessee may subscribe to a different philosophy as it pertains to general education requirements. It is recognized that these variances are reflections of differences in institutional mission, program scope, and student type, as well as other factors.

Taken out of the context of the entire policy, the above statement would appear to give unlimited breadth to the treatment of the general education core curricula in transfer. However, SBR Policy Number 2:01:00:00 also contains guidelines on the specific general education requirements for a baccalaureate degree or an associate degree designed for transfer purposes. Additionally, this document contains information on the treatment of remedial or developmental courses and high school unit deficiencies as they apply to credit hours required for any certificate, associate, or baccalaureate degree.

MSU (Memphis State University) has recently revised the general education core curriculum for the baccalaureate degree and has published these requirements in the General Education Manual (1987:B.2). This manual contains a broad selection of courses that will satisfy the general education

core requirements for the baccalaureate degree under each specific subject area.

TSU (Tennessee State University) publishes its general education core curriculum requirements for the baccalaureate degree in each edition its undergraduate bulletin. The most recent version of TSU's general education core curriculum for the baccalaureate degree is published in the Undergraduate Catalog (1987-89:21-22). This document contains a broad selection of courses that will satisfy the general education core curriculum requirements for the baccalaureate degree under each specific subject area. The course listing is further divided to indicate the specific requirements for the Bachelor of Arts and Bachelor of Science degrees.

SSCC (Shelby State Community College) annually publishes the general education core requirements for its Associate of Arts and Associate of Science degrees (University parallel) in the Bulletin (1988-89:71-76). This set of general education core curricular requirements are considered to provide the most appropriate combination of disciplinary competencies necessary to succeed in further study at the baccalaureate level. One observed weakness is evident in all of the above literature. That weakness is the fact that none of the above documents appear to be designed specifically for the purpose of promoting transfer articulation between and among institutions in SBR.

To the extent to which these resources, and numerous others, provide documented evidence of the need for strong articulation and the methods by which to achieve it, they have been utilized to guide the systematic development of the articulation model derived in this major applied research project. The information gained from reviewing thoroughly the literature on articulation and transfer significantly influenced the content, nature, and scope of the articulation model derived in this study. By incorporating the methodology and insights presented in these documents, it was possible to conceive an articulation model believed to have the capability of assisting in meeting the needs of SBR. Specifically, the formulation of a systematic approach to facilitating articulation processes was deemed necessary to improve educational practice. The information contained in the literature relative to the history, trends, and problematic areas of articulation was utilized to form a sound knowledge base from which to pose solutions to or avoid problems. The conceptual framework for the model was developed, in part, by drawing on some of the principles and procedures incorporated in models already developed for other institutions and systems.

Chapter 3

PROCEDURES AND METHODOLOGY

The Case Study Approach

The case study approach to problem-solving was utilized to conduct this major applied research project. This approach involved studying intensively the background, environmental interactions, and current status of the units of analysis, SSCC, MSU, and TSU. For purposes of this major applied research project, "cases" refer to the individual higher education institutions, and "case records" refer to the comprehensive set of data about each individual institution under investigation. Procedurally, a case record was established on articulation for each institution under investigation in this project. The data collected to establish the case record on each institution were only those data that served to assist in formulating solutions to the previously posed research questions.

After the individual case records and narratives were established, a cross-case analysis was conducted to determine differences and similarities in the elements comprising the cases. Since the major focus of this major applied research project is articulation of the general education core curriculum, these common variables are

comprised of specific elements of the general education core curricula. As precisely as possible, the case record and case analysis narratives were constructed in a systematic flow. The entire methodology utilized in carrying out this major applied research project is discussed below.

Overview of Major Tasks

To carry out this major applied research project, an intensive review of the literature was conducted. This review of the literature was conducted to determine what other states, institutions, and/or systems of higher education institutions have done to devise and implement uniform articulation agreements and programs. Elements of these existing programs that are compatible with the SBR system's academic, administrative, and technological framework were adapted for use in the model derived in this project.

Case records were established on TSU, MSU, and SSCC. This was done to provide a systematic framework from which to analyze the characteristics of these institutions. A cross-case analysis was conducted on the case records for these institutions to determine commonality and differences in their general education core curricula.

A common general education core curriculum of courses and credits for the Associate of Arts and Science, and Bachelor of Arts and Science degree programs (university parallel) was derived from the results of the cross-case

analysis and recommended as part of the model for use by SBR institutions. Additionally, a common course numbering system designed to designate course level and content, and facilitate use of uniform student information systems software was devised. These procedures were needed to support a recommendation to SBR that graduates of associate degree-granting institutions within the SBR system be fully admitted to universities in junior level status with no loss of credits and without having to repeat courses.

Sources of Data

Several sources of evidence were the focus of data collection for the formulation of the articulation model derived in this project. Data for this major applied research project were collected from multiple sources. Those sources primarily included the following: (1) Published literature about articulation, (2) Articulation plans and documents provided by other states, institutions, and/or systems of higher education, (3) Telephone and personal interviews, (4) Professional Meetings, and (5) Meetings with SSCC personnel. In addition to these primary sources, other sources of data included SBR Academic Policies, the SSCC Bulletin, the undergraduate catalogs of MSU and TSU, and course syllabi. Now that these distinctions have been made, it is in order to describe the procedural manner in which the data was collected.

Description of Data Collection Procedures

To collect the needed data for the above tasks, the appropriate higher education commissions, boards, systems, and institutional officers were contacted for information and assistance by telephone, mail, and in person. Further information on these sources is provided, in turn, below.

Published Literature

A thorough review of the literature was conducted to determine what others have written and published about articulation, common course-numbering systems, and related computer support. These publications were obtained from a literature search of the Educational Resource Information Center (ERIC) databases, the Nova University, MSU and SSCC libraries, and the Memphis Public Library and Information Center (MPLIC).

Documents from State Agencies

Letters were written to every state commission on postsecondary education, agency, institution, and/or system of higher education that had been identified as either currently utilizing or designing some type of uniform articulation program. Each letter contained a request for information and samples of any documents or materials available on articulation, common course numbers, and

computer support. Additionally, the letters contained an explanation of the purpose for the request.

Telephone Interviews

Key personnel at MSU and TSU were contacted by telephone. These key personnel included the Academic Vice Presidents and Deans, and persons that they identified as having the direct responsibility for the general education core curriculum and interinstitutional articulation. The purpose of these interviews was to ascertain the extent to which articulation already existed, to explain the purpose of this study, and to request information and documents relative to the content of the general education curricula at those institutions. Additionally, personal interviews were requested with key personnel to discuss articulation. These discussions were aimed at determining the extent to which these persons support uniform articulation, and individual perceptions as to the ideal general education core curriculum for all liberal arts programs in the SBR system.

Personal Interviews

Personal interviews involved discussions with key personnel from MSU and TSU. These verbal interchanges began with a brief description and overview of this major applied research project. The interviews were open-ended in that respondents had an opportunity to interpose their own insights on the direction of the study. The persons

interviewed were specifically asked to give their general opinions regarding the need for uniform articulation, the composition of the general education core curriculum at their respective institutions, and suggestions regarding the formulation of a uniform articulation program within the SBR system.

Meetings With SSCC Personnel

Several meetings were held with the President, Academic Dean, and the Assistant Dean for General and Transfer Studies at SSCC. These meetings began with a brief description of this study, followed by a more in-depth presentation of the intended results and procedures for carrying out the study. These educators were asked to give their general opinions regarding the need for uniform articulation within the SBR system, and how it could benefit SSCC graduates and support the mission of the institution. These were open-ended discussions wherein all individuals were allowed to interject their insights regarding articulation. These professionals were requested to give additional information and support if needed during later stages of the study.

Data Analysis

To systematically analyze the comprehensive sets of data collected, cross-case analysis was utilized. As precisely as possible, the narrative for the cross-case

analysis was constructed in a systematic flow. That is, a general identifier statement on the nature of the variable was presented. Then the background, elements that comprise the variable, and their current application were considered. A qualitative judgement on the merit, relevance, or value of the variable was made within the context of the model derived in this study. As previously indicated, the data collected was directly related to the research questions posed, and was qualitatively analyzed using the case study methodology. That is, the elements contained in the case records established for MSU, TSU, and SSCC were compared to determine what courses are common requirements at each institution. The course descriptions of these requirements were analyzed to determine if content duplication also exists. Course syllabi were also analyzed to determine if the goals and objectives of the courses are similar. Common course numbers were assigned to courses that were determined to be equivalent.

The complete general education core curricula contained in the case records for MSU, TSU, and SSCC were analyzed and compared. This comparative analysis was conducted to determine what, if any, differences existed in requirements from one institution to another. Information obtained from the literature review was utilized to determine how other institutions and/or systems have treated these differences in achieving curricular uniformity.

Information obtained from the literature review, interviews, and meetings with various academic personnel were utilized to make certain determinations. These determinations relate to how articulation and transfer can be facilitated in the SBR system within the context of a uniform academic calendar, standardized student information system software, and a common course numbering system. Ultimately, this information was utilized to support the recommendation that SBR adopt a system-wide uniform articulation program.

Chapter 4

PRESENTATION OF RESULTS

Statement on Organization of Results Presentation

In order to provide clarity to the manner in which the Presentation of Results Section of this study is constructed, the following information is furnished:

1. Five research questions were posed for this investigation; they are answered, in turn, below.
2. To answer the research questions, a procedure or methodology was utilized to do so; the procedure or methodology utilized is directly related to the research question posed, and is presented in the format of an answer to the interrogative.

Now that the above qualifications have been made, it is in appropriate order to proceed with the presentation of results and Case Records on TSU, MSU, and SSCC. After the case records have been presented below, the cross-case analysis is presented. It is important to note that, as previously indicated, the case records were focused only on those characteristics of the institution determined to have a direct relationship to this study. It should also be noted that the case records were constructed to facilitate

answering three of the five research questions posed for this project. For purposes of clarity and organizational continuity, the answers to these research questions are provided in each section below, and following the case records and cross-case analysis.

Results of Data Collection Procedures

Published Literature

Published literature utilized in this major applied research project included all of the written materials listed in the Bibliography section of the report. This comprehensive literature review resulted in an invaluable reservoir of information and resources relative to the need for uniform articulation agreements among institutions of higher education, the procedures, benefits, and impediments to the establishment of such relationships, and documentation on articulation efforts inside and outside Tennessee. Additionally, these literature sources contained examples of several currently used articulation agreements that were utilized in formulating a systematic operational framework for the model derived in this study. Specifically, these sources contained examples of the nature and scope of articulation agreements with respect to actual agreed-upon courses, content, credits, and the procedures for treatment of these elements in transfer. Additionally, these sources contained invaluable information relative to staffing and procedures to facilitate the articulation process.

Documents from State Agencies

Letters mailed to state commissions on postsecondary education, other state education agencies, institutions, and systems of higher education resulted in numerous responses. These responses were in the form of printed documents and articulation agreements currently in use by their organizations. Many of the responses included a cover letter explaining various aspects of the printed documents, and indicating a willingness to provide further assistance with this project, if needed.

These documents and materials contained a very invaluable repository of information on articulation and transfer policies and procedures. Additionally, some of these documents included information relative to common course-numbering systems currently in use. The states that responded to the letter sent included Alabama, Arizona, Colorado, Florida, South Carolina, Wyoming, and Tennessee. Additionally, the materials from California and Florida included information on articulation and common course-numbering activity in other states. By studying the content and format of these documents and materials, it was possible to conceptualize the mechanics of the model derived in this study. By and large, these documents and materials rank very prominently in order of importance when compared to other aspects of data collection.

Most importantly, however, the literature review and the documents received from state agencies were utilized to answer certain research questions. Specifically, information from these sources was utilized to answer the research question pertaining to how other states have solved the articulation problem. This information was also utilized to answer the research question pertaining to how the use of common course-numbering systems and uniform academic calendars can facilitate a computer-assisted articulation model.

Telephone Interviews

Telephone interviews with key personnel at MSU and TSU provided verifiable evidence of the extent to which articulation issues are a priority at those institutions. Personnel interviewed at both institutions were those who had been designated by the respective Vice Presidents for Academic Affairs as having direct responsibility for articulation. In each instance, these individuals indicated that transfer credits were evaluated on a case by case, course by course basis. Additionally, it was indicated that some articulation agreements had been established with selected institutions within and outside the SBR system of colleges and universities. The results of these interviews indicated that, while they were aware of the problems that community college students face in transfer, no attempt was currently being made to minimize these problems. Persons

interviewed also indicated that plus-two articulation agreements, of the type utilized by Florida, have never been considered. All individuals interviewed favored their own general education core curriculum as ideal for SBR. Additionally, personnel from each institution cooperated by promptly sending copies of documents that contained their respective general education core curricula.

Personal Interviews

Personal interviews with key personnel from MSU and TSU were conducted specifically for the purpose of obtaining additional information on individual perceptions about uniform articulation. One of the interviews resulted in little insight or opinion regarding the need for uniform articulation within the SBR, but resulted in valuable information regarding elements of the general education core curriculum. The other interview resulted in a great deal of justification for the elements included in the general education core curriculum. Additionally, this interview resulted in a request for further dialogue on the idea of devising a uniform plus-two articulation program in SBR. The immense value of both interviews reside in the fact that personnel at both institutions were quite willing to discuss the problem. This fact alone serves to indicate that the implementation of a uniform model is feasible. None of the interviewees indicated familiarity with computer-supported articulation and transfer mechanisms. However, they did

agree that computer support would be a timely feature of the model discussed.

Meetings with SSCC Personnel

Prior to actually meeting with SSCC personnel, the President, Academic Dean, and Assistant Dean for General and Transfer Studies were given a copy of this major applied research project proposal. Several informal meetings were held with each of these individuals to discuss the ideas proposed. Each individual seemed highly enthusiastic about the project, and indicated a willingness to assist in any way possible. Additionally, the President indicated his commitment to the proposed uniform articulation model in writing.

These meetings and discussions resulted in very invaluable information relative to the perceived philosophical intent of the general education core curricula. Additionally, these discussions resulted in a basis for comparing the perceptions of individuals employed in universities with those of persons employed at SSCC. Findings were interpreted to indicate that there is little difference in the perceived purpose of the general education core curricula from institution to institution. All personnel involved in these meetings and discussions agreed that a uniform articulation agreement among SBR institutions would benefit thousands of transfer students and facilitate the transfer mission of SSCC. These results, all too

clearly, may be interpreted to indicate acceptance of the idea and the potential for interinstitutional cooperation.

Case Record on Tennessee State University

According to the TSU Undergraduate Catalog (1987-89:4), the present-day TSU exists as a result of the merger on July 1, 1979, of the former Tennessee State University and University of Tennessee at Nashville. Through successive stages, TSU has developed from a normal school for Negroes to its current status. By virtue of a 1909 Act of the General Assembly, the Agricultural and Industrial State Normal School was created, along with two other normal schools in the State, and began serving students on June 19, 1912.

In 1922, the institution was raised to the status of a four-year teachers' college and was empowered to grant the bachelor's degree. The first degrees were granted in June, 1924. During the same year, the institution became known as the Agricultural and Industrial State Normal College; and in 1927, "Normal" was dropped from the name of the College.

In 1941, The Tennessee State Board of Education (TSBE) was authorized by The General Assembly to substantially upgrade the educational program of the College, which included the establishment of graduate studies leading to the master's degree. Graduate curricula were first offered in several branches of teacher education. The first master's degree was awarded by the College in June, 1944.

Accreditation of the institution by the Southern Association of Colleges and Schools was first obtained in 1946. In August, 1951, the institution was granted university status by approval of the TSBE. The reorganization of the institution's educational program included the establishment of the Graduate School, the School of Arts and Sciences, the School of Education, and the School of Engineering. Provisions were also made for the later addition of other schools in agriculture, business, and home economics, respectively.

The University became a full-fledged, land-grant university by action of the TSBE in August, 1958. The Land-Grant University program, as approved by the TSBE, included: the School of Agriculture and Home Economics, the Graduate School, the Division of Business, the Division of Extension and Continuing Education, and the Department of Aerospace Studies. In 1974, a School of Allied Health Professions was authorized, from which the School of Nursing emerged in 1979. The School of Business was established in 1974.

The now defunct University of Tennessee at Nashville (UTN) was begun initially in 1947 as an extension center of the University of Tennessee, which is based in Knoxville. UTN offered only one year of extension credit until 1960, when it was empowered by the Board of Trustees of the University of Tennessee to offer two years of resident credit. Authorization was granted to extend this empowerment to three years of resident credit in 1963, even though degrees were awarded by the Knoxville unit.

To more fully realize its specific commitment as a full-function evening university, the Center at Nashville became a full-fledged, four-year, degree-granting institution in 1971 upon successfully meeting the requirements for accreditation by the Southern Association of Colleges and Schools. During the same year, the General Assembly sanctioned the institution as a legitimate campus of the University of Tennessee, and the new university occupied its quarters in the building at the corner of Tenth and Charlotte Avenues in Nashville.

It was the erection of the above-mentioned building that gave rise to a decade-long litigation to "dismantle the dual system" of higher education in Tennessee. The litigation culminated with a court ordered merger, issued by Judge Frank Gray, in February, 1977. The missions of the two universities, TSU and UTN, are highly compatible due to their historic backgrounds and establishment as land-grant institutions.

As a land-grant institution, TSU has as its mandates instruction, research, and public service. The University is intended to contribute to the advancement of persons who seek its services and can profit from its broad educational programs. TSU stimulates its students and the citizens of Tennessee to reach their full potential through respect for inquiry and appreciation of cultural traditions.

The governance and control of TSU is vested in the State Board of Regents (SBR). The SBR consists of eighteen

members including thirteen appointed by the Governor; four ex officio members--the Governor, Commissioner of Education, Commissioner of Agriculture, and the Executive Director of the Tennessee Higher Education Commission--and the immediate past Commissioner of Education. Nine appointed members are from each congressional district, and three are approved at-large from different geographical areas of the state. A student regent is appointed from among the SBR system institutions for a one-year term.

The University imbues its clientele with the desire to develop basic knowledge and skills that will enable them to succeed in an ever-changing world, develops the leadership needed for advancement of knowledge, and applies that knowledge toward the improvement of the state and the nation. To the extent to which this is possible, the curriculum at TSU is grounded in a philosophical base that supports the basic tenets of a liberal arts education. One of the aims of TSU is to maintain high standards of instruction in general education, continuing education, and in the curricula and fields of specialization through which degree programs are offered.

To this end, the general education core curricula for degree-seeking students in the arts and sciences are presented below. Before doing so, however, the following element abbreviations are defined:

ENG - English

LANG - Foreign Language

SSCI - Social Sciences

SCI - Natural or Physical Sciences

MATH - Mathematics

HUM - Human Studies, Philosophy, Art, Music

PE - Health or Physical Education

SPCH - Public Speaking or Oral Communication

The above case record element definitions are provided here for easy reference, and to provide clarity in interpreting the contents of the Tables presented below. It should be noted that the abbreviations utilized for the various subject areas are designed to conform to the data field definitions contained in SBR student information system software.

The curricular requirements listed in Table 1 comprise the minimum General Education Core Curriculum for the Bachelor of Arts degree at TSU. To complete the general education core requirements, nine hours of social science, including six semester hours of American History must be completed. Twelve semester hours of English, including ENG 101 and 102, is required. Four semester hours in humanities (art, foreign language, drama, speech, music or philosophy) must be taken from two of the specific disciplines. Four hours of activity physical education courses is required. Additionally, six semester hours in natural science (biological or physical) must be completed.

Table 1

Distribution of TSU General Education Core Requirements for the Bachelor of Arts Degree

Course	Number	Title	Minimum Credit Hours
ENG	101U, 102U	English	6
ENG	211, 212	Literature	6
LANG		Foreign Language	6
SSCI*		Social Sciences	9
SCI		Natural Sciences	6
MATH		Mathematics	3
HUM		Philosophy, Art, Music, etc.	4
PE		Physical Education	4
	Total Hours Required		44

*includes six hours American History

The general education core curriculum for the Bachelor of Science degree follows the general philosophical tenets expressed in all of the University's curricular requirements. It is designed to provide the knowledge base for successful pursuit of science-related curricula. These curricular requirements are presented in Table 2 below. Where course numbers are missing, a broad selection of lower division courses numbered in the "100" and "200" series is available.

Table 2

Distribution of TSU General Education Core Requirements for the Bachelor of Science Degree

Course	Number	Title	Minimum Credit Hours
ENG	101U, 102U	English	6
ENG	211, 212	Literature	6
LANG		Foreign Language	0
SSCI*		Social Sciences	9
SCI		Natural Sciences	8
MATH		Mathematics	3
HUM		Philosophy, Art, Music, etc.	4
PE		Physical Education	4
	Total hours required		40

*includes six hours American History

The above courses comprise the general education core curriculum for the Bachelor of Science degree at TSU. Except for a different emphasis on the Foreign Languages and the Natural Sciences, it is comprised of requirements similar to those for the Bachelor of Arts degree.

In the interest of focusing periodically on the purpose of this section of this study, it is important to restate the purpose of this presentation. By constructing case records on the institutions under investigation in this

study, it was possible to draw certain inferences and conclusions, and ultimately form the basis for a comparative analysis across the cases constructed. Now that this distinction has been made, it is in order to proceed to a presentation of the case record on MSU.

Case Record on Memphis State University

According to information contained in the MSU Undergraduate Catalog (1986-87:6), the institution's roots date back to September 15, 1912. This date marked the opening of the West Tennessee Normal School, which provided training for primary and secondary education teachers. However, the seeds for the normal school's creation were sown three years earlier, in 1909, when the Tennessee General Assembly passed a General Education law calling for the establishment and maintenance of three normal schools, one school located in each of the three grand divisions of the State. The eastern edge of Memphis became the site for the West Tennessee State Normal School, which in 1925 became the West Tennessee State Teachers College. In 1941, the curriculum in liberal arts was expanded, and the name was changed to Memphis State College, an institution serving three to four thousand students. The undergraduate program was reorganized into three schools and a graduate school was added in 1951. On July 1, 1957, Memphis State achieved its status as a university, and has since expanded its degree programs to serve a student population of over 20,000.

The governance and control of MSU is vested in the State Board of Regents (SBR). The SBR consists of eighteen members including thirteen appointed by the Governor; four ex officio members--the Governor, Commissioner of Education, Commissioner of Agriculture, and the Executive Director of the Tennessee Higher Education Commission--and the immediate past Commissioner of Education. Nine appointed members are from each congressional district, and three are approved at-large from different geographical areas of the state. A student regent is appointed from among the SBR system institutions for a one-year term.

The schools and colleges comprising the University are The Graduate School, The Cecil C. Humphreys School of Law, The University College (undergraduate only), The School of Nursing, and the five colleges offering graduate and undergraduate programs: The College of Arts and Sciences, The Fogelman College of Business and Economics, The College of Education, and the Herff College of Engineering. In addition, there is one independent graduate department, Audiology and Speech Pathology. At the undergraduate level, independent departments are: Aerospace Studies, Military Science (Army ROTC), Naval Science (Navy ROTC), and Urban Studies.

The University is fully accredited by the Southern Association of Colleges and Schools with a commitment to the advancement of learning. Dedicated first to the traditional ideals of learning by focusing its attention and efforts

upon the creation, transmission, and the application of knowledge, MSU is committed to goals that are utilitarian. These utilitarian goals encompass preparing students to serve in a variety of professions and occupations, and providing services to society for improving the quality of life and environment. Through its basic mission of instruction, research, and public service, a diversity of learning opportunities for the pursuit of knowledge and truth in an atmosphere of free inquiry and open discussion is proffered at MSU. Faculty at the University foster a collegiate atmosphere that is broad and culturally enriching in which students may strive toward intellectual competence, maturity, and self-development within the context of a liberal based education.

The philosophical basis for all of the programs and curricula offered at MSU are grounded in the liberal arts tradition. Deeply ingrained in the liberal arts tradition is the idea that certain disciplinary elements are essential as the foundation upon which educational programming is built. These philosophical tenets and curricular elements comprise the general education core curriculum at the University. One of the aims of MSU is to maintain high standards of instruction in general education, continuing education, and in the curricula and fields of specialization through which degree programs are offered.

According to information contained in the MSU General Education Manual (1987:A.2), the general education

Table 3

Distribution of MSU General Education Core Requirements for all Baccalaureate Degrees

Course	Number	Title	Minimum Credit Hours
ENG	1101, 1102	English Composition	6
ENG	*LD	Oral Communication and Rhetoric	3
MATH	*LD	Mathematics	3
HUM	*LD	World Heritage:	
		Literary Heritage	3
		Fine Arts Heritage	3
		Historical/Philosophical Heritage	6
HIST	*LD	American Heritage	6
SSCI	*LD	Social Institutions/ Social Science	6
SCI	*LD	Natural Science	8
PE	*LD	Fitness/Wellness	4
	Total hours required		48

*Lower division selections from an array of course numbers.

program is that part of the undergraduate curriculum designed to promote a common academic background for all baccalaureate candidates. It is further stated in this document that the curricular requirements are intended to

> help students develop the skills necessary for completing a college career and for assuming an active role in contemporary society, to give students an awareness of the diversity of human endeavors in intellectual, creative, social, and technological spheres, and to help students develop analytical and critical faculties that can be applied across the range of issues confronting them in the modern world. Above all, the general education program should make available to the student the tools and awareness necessary for active, lifelong learning and for active, literate participation in society.

The curricular requirements listed above comprise the General Education Core Curriculum for all baccalaureate degree programs at MSU. To the end expressed above, Table 3 embodies this philosophical intent through the curricular requirements of nine semester hours of Oral and Written Communication, three hours of Mathematics, twenty-four hours in Human Studies, eight hours in Natural Science, and four hours in Physical Education.

As indicated in the introduction to this study, three institutions are primarily the focus of investigation. Having presented the case records on TSU and MSU above, it is now in order to proceed to an examination of SSCC, the two-year institution in the trio.

Case Record on Shelby State Community College

Founded in 1970, SSCC is one of ten community colleges governed by the SBR. After opening in temporary quarters in the fall of 1972 to an initial enrollment of 1,059, the College had grown to a student body of 5,585 during the 1980-81 academic year. SSCC currently has 3,822

students enrolled in General and Transfer Studies, Career Studies, and Remedial and Developmental Studies. The institution is currently comprised of the main campus, a $25 million physical plant in mid-town Memphis, a North Memphis campus in Frayser, two multi-purpose learning centers in Southeast Memphis and at the U. S. Naval Air Station in Millington, respectively.

An urban, two-year, public-assisted, open admission institution of higher learning, SSCC is the ninth community college established in Tennessee. The community college system in Tennessee was established as a result of the Pierce-Albright Report which recommended that additional educational opportunities be made available to Tennessee residents on a local basis.

According to the SSCC Bulletin (1988-89:5), the primary goal of the College is to meet the educational needs of the Memphis area. As a teaching institution, SSCC was established to provide instructional excellence throughout its diverse educational programs. The institution awards the Associate of Arts and Associate of Science degrees with courses that are transferable to universities and colleges for students who desire higher academic degrees. Career programs are occupationally focused to prepare students for immediate employment and certification by licensing agencies. Students seeking employable skills in a broad range of career areas may earn certificates or Associate of Applied Science degrees. Qualified non-degree seeking

persons wishing to continue their education may pursue courses and experiences providing personal enrichment and job skills. At SSCC, academically underprepared students are offered extensive educational instruction and assistance to develop the academic skills and competencies necessary for successful college level study.

Overall, SSCC is committed to providing for its service delivery area comprehensive post-secondary and continuing educational experiences at multiple locations for all students. With the primary emphasis on learning, low cost and high quality, the College's resources are focused on helping individuals to live meaningfully in society. Cooperative arrangements, on- and off-campus, are sought with businesses, agencies, individuals, institutions and groups involved in professional or technical training and leadership. Priority is given to the academic, career, personal, economic and social education of individuals.

For purposes of this study, the SSCC General Education Core Curriculum for liberal arts and sciences transfer programs was examined. This Core Curriculum was designed to provide exposure to alternative perspectives on life, and allow for the exploration of various subject areas without demanding final commitment to a single emphasis. The central purpose of this set of courses, then, includes the development of effective and responsible citizenship, appreciation for the full spectrum of academic study and analysis, the facilitation of ability to know when and where

to find information outside one's main area of interest, and the fostering of awareness of values related to varying

Table 4

*Distribution of SSCC General Education Core Requirements for the Associate of Arts Degree

Course	Number	Title	Minimum Credit Hours
ENG	1010, 1020	English I, II	6
ENG	2010-2650	Literature	6
SPCH	1110-2610	Oral Communication	3
LANG		Foreign Language	6
MATH	1420-2030	Mathematics	3
SCI	1410-2220	Natural/Physical Science	8
SSCI	1010-2220	Social Sciences (including History)	12
HUM	1050-2150	Fine Arts and Philosophy	6
PE	1530	Health and Physical Education	2
		Total Hours Required	52

*Optional courses may be selected within each discipline except for ENG 1010, 1020.

aspects of human knowledge and experience. The General Education Core Curriculum for transfer program students at SSCC is based in the philosophical liberal arts tradition, and is intended to parallel these similar requirements at

most four-year institutions to which its students transfer. It is a competency-based curriculum in that students who complete the course requirements are expected to have attained certain specified competencies. To this end, the SSCC general education curricular requirements listed in Tables 4 and 5 are published for its transfer degrees.

The core curriculum requirements for the associate of arts program is especially suited for students who may decide to pursue baccalaureate degrees in areas such as philosophy, foreign languages, art, music, speech, and English. As indicated in Table 4, these requirements may be met by completing twelve credit hours of English, three credits of oral communication, six credits in a foreign language, three credits in mathematics, eight credits in natural or physical sciences, twelve in the social sciences, six in the humanities, and two in health and physical education.

The science oriented-program of general education core requirements is especially suited for students who wish to pursue a baccalaureate degree in subjects such as mathematics, natural sciences, and social sciences. As indicated in Table 5 below, these requirements may be met by completing twelve credit hours of English, three credits of oral communication, six credits in mathematics, eight credits in natural or physical sciences, twelve in the social sciences, six in the humanities, and two in health and physical education.

Table 5

*Distribution of SSCC General Education Core Requirements for the Associate of Science Degree

Course	Number	Title	Minimum Credit Hours
ENG	1010, 1020	English I, II	6
ENG	2010-2650	Literature	6
SPCH	1110-2610	Oral Communication	3
LANG		Foreign Language	0
MATH	1420-2030	Mathematics	6
SCI	1410-2220	Natural/Physical Science	8
SSCI	1010-2220	Social Sciences (including History)	12
HUM	1050-2150	Fine Arts and Philosophy	6
PE	1530	Health and Physical Education	2
		Total Hours Required	49

*Optional courses may be selected within each discipline except for ENG 1010, 1020.

Now that the above case records have been presented on TSU, MSU, and SSCC, it is in order to proceed to the presentation of the cross-case analysis. As previously indicated and reiterated here, the purpose of the cross-case analysis is primarily to determine differences and similarities in the elements comprising the case records established on the institutions investigated.

Cross-Case Analysis on TSU, MSU, and SSCC

The case record narratives on TSU, MSU, and SSCC contained a brief history of each institution to provide context emergence of each. Context emergence is the philosophical framework in which each institution developed to its present-day status. Context emergence cannot be underestimated, for it contains the philosophical tenets that led to inclusion of certain disciplines in the general education core curricula and exclusion of others. Were it not for the strong leanings toward a "liberal" education in the founding of these institutions, the content of the general education core curricula might be different. Nevertheless, it may be concluded that the elements of the general education core curricula form the most meaningful basis for analysis. A composite of the general education core curricula is presented in Table 6 below.

A cross-case comparative analysis of the data presented in Table 6 below was interpreted to indicate that TSU, MSU, and SSCC all agree on seven disciplines as comprising the general education core curriculum for the associate or arts and bachelor of arts degrees. These agreed-upon disciplines, as listed below in Table 6, are ENG, LANG, SSCI, SCI, MATH, HUM, and PE. Differences exist, however, in the credit hour distribution across these

agreed-upon disciplines. All three institutions' curricula, for example, contain the requirement of three hours of

Table 6

Composite Distribution of General Education Core Requirements for the Bachelor of Arts and Associate of Arts Degrees at TSU, MSU, and SSCC

Subject Area	Minimum Credit Hours		
	TSU	MSU	SSCC
ENG*	12	9	15
LANG	6	0	6
SSCI	9	12	12
SCI	6	8	8
MATH	3	3	3
HUM	4	12	6
PE	4	4	2
Total hours required	44	48	52

*includes SPCH and Oral Communication.

mathematics, while only two have a six-hour language requirement. Two institutions consider twelve credits to be adequate in the social sciences, while the other considers nine credits to have met this requirement.

The importance of these findings cannot be overemphasized since these commonalities appear to represent a

significant milestone in the formulation of a model general education core curriculum for all SBR institutions. Since these common subject areas are already agreed upon, the gaps that exist in the credit hour distribution might be easily resolved. Now that these distinctions have been made, it is in order to proceed to the presentation of the general education core curricula requirements for the Associate of Science and Bachelor of Science degrees.

Table 7

Composite Distribution of General Education Core Requirements for the Bachelor of Science and Associate of Science Degrees at TSU, MSU, and SSCC

Subject Area	Minimum Credit Hours		
	TSU	MSU	SSCC
ENG*	12	9	15
SSCI	9	12	12
SCI	8	8	8
MATH	3	3	6
HUM	4	12	6
PE	4	4	2
Total hours required	40	48	49

*includes SPCH and Oral Communication

A cross-case comparative analysis of the requirements for the Bachelor of Science and Associate of Science Degrees in Table 7 above, was interpreted to indicate that all three institutions agree that six specific subject areas should comprise the general education core curriculum in the sciences. These subject areas include ENG, SSCI, SCI, MATH, HUM, and PE. Except for the SCI requirement, the institutions disagree on the credit hour requirements in each area. For example, three hours in mathematics are required at TSU and MSU while six hours are required at SSCC; four credit hours in HUM are required at TSU, while twelve and six, respectively, are required at MSU and SSCC.

A comparative analysis of the general education core curricula for the Bachelor and Associate of Science degrees and the Bachelor and Associate of Arts degrees revealed several differences. These differences mainly exist in the SCI, MATH, and LANG requirements. For example, no LANG is required for either degree at MSU while six hours are required, respectively, at TSU and SSCC for the Arts degree and none for the Sciences degree. Additionally, only six credit hours in mathematics are required at TSU for the Arts degree while eight hours are required at MSU and SSCC, respectively.

An analysis of the course descriptions, course syllabi (where available), and course objectives was interpreted to indicate that the array of course selections in each subject area for each institution were similar in

content and scope. Additionally, the expressed purpose of the General Education Core Curricula across TSU, MSU, and SSCC is almost identical in context.

The findings derived in this cross-case analysis, therefore, clearly contain answers to the research question pertaining to which programs and courses in community colleges are considered equivalent or "parallel" in universities within the SBR. The crux of this answer lies in the finding that community colleges, in this study SSCC, consider the core requirements listed in Tables 4 and 5 to be equivalent in context to those similar requirements listed for the Universities, TSU and MSU. Additionally, the cross-case analysis has revealed the answer to the research question pertaining to differences and commonalities in the general education core curricula across these institutions. The findings from this analysis were interpreted to indicate clearly that there are striking similarities across the institutions in some subject areas, and vast differences among these institutions in other subject areas.

For a variety of reasons, it is no longer tenable to counter the criticism that SBR's colleges and universities are not concerned about the devaluation of the transfer function. The claim that community colleges are best suited for other more distinctive functions is baseless. Community colleges continue to serve as the major gateway to higher education for minorities, a phenomenon that converts articulation from a purely educational process into a social

priority. Additionally, SBR's universities cannot afford to lose potential liberal arts and science transfer students to other market forces in this period of declining enrollments. For these, and many other reasons, it would seem logical to deploy a portion of the vast educational resources in SBR to the task of implementing the articulation model presented below:

Articulation Model Between Shelby State Community College and Two Comprehensive State Universities

Based on the information obtained from the review of literature, documents provided by state agencies, telephone and personal interviews, the results of the cross-case analysis, and the opinions of higher education writers, the following Articulation Model between MSU, TSU, and SSCC is provided. Components of the model are presented after each respective subheading, followed by a rationale for each component. The Model provided is based partially on existing aspects of the general education core curricula at TSU, MSU, and SSCC. Additionally, components of the model are designed to conform with SBR policy on degree requirements for students in university parallel transfer programs. By and large, the essential framework of the entire model is based in concept on the components of existing models in Florida (1988a:24-25, 1988b:7), and systems discussed by the California Postsecondary Education Commission (1984:5-26),

Heard (1987:1-21), Schinoff (1982:1-12), and Hendershot (1982:93-97).

Definition of Plus-Two Articulation

The following definition of plus-two articulation is proposed:

> Plus-two articulation is a formal agreement between two- and four-year SBR institutions that associate degree holders will be accepted in transfer at junior level standing by a systematic process that guarantees the students' continuous advancement in learning.

Rationale. It was inferred from information contained in the literature sources, and personal and telephone interviews that several different interpretations of the term "plus-two articulation" are currently in use. Therefore, it was concluded that a logical first step to diffusion of the Model would be to provide a definitive explanation of it. The inclusion of the term "process" in the definition of plus-two articulation above is intended to mitigate the idea that "articulation" ends when courses are specified in a document.

The General Education Core Curriculum

The following courses represent the minimum general education core curricular requirements for students in baccalaureate degree and liberal arts transfer programs for all SBR institutions. In addition to the forty-nine credit hours specified below, fifteen additional lower division electives must be completed. The SBR Policy on Degree

Requirements specifies that sixty-four semester hours of coursework must be completed for the associate degree.

Table 8

Distribution of General Education Core Requirements for the TSU, MSU, and SSCC Articulation Model

Discipline	Number	Title	Minimum Credit Hours
ENG	1xxx, 2xxx	English	6
LANG	1xxx, 2xxx	Foreign Language	6
HUM	1xxx, 2xxx	Humanities	9
MATH	1xxx, 2xxx	Mathematics	6
SSCI	1xxx, 2xxx	Social Science	12
SCI	1xxx, 2xxx	Natural/Physical Sciences	8
PE	1xxx, 2xxx	Physical Education	2
		Total Hours Required	49

Note: "xxx" is utilized to indicate institutionally assigned numbers.

Rationale. The rationale for specifying the seven disciplines listed above is because they conform to those specified by the institutions investigated in this study and examples found in the literature. Additionally, these disciplines conform to those required in the SBR Policy on Degree Requirements (1987). The Discipline abbreviations are so configured to comply with the four-character,

alphabetic data field definition in the uniform SBR student information system. The four-digit Number designations are so configured to require a consistent first digit that designates level of courses comprising the general education core. Additionally, the numerical designations are configured to comply with the four-character, numeric data field definition in the uniform SBR student information system. The Minimum Credit Hours are so specified to comply with the SBR Policy on Degree Requirements (1987:1-2).

Not only are the above general education core curricular requirements designed to achieve standardization among SBR institutions, they are also designed to make possible the utilization of computer assisted interinstitutional articulation and transfer processes. This is true because all SBR institutions utilize a standardized student information system, and because the Discipline, Number, and Credit Hour descriptors are consistent in the model. Utilization of computer assisted articulation mechanisms is based on the operational framework discussed in Florida (1988a:24-25, 1988b:7), Heard (1987:1-21), Hendershot (1982:93-97), and Schinoff (1982:1-12). These computer assisted processes include automated degree monitoring, academic advising, transcripting, and transfer credit evaluation. Ultimately, by completing the requirements in the above model, students at TSU and MSU, and associate degree holders from SSCC would be classified as juniors. In the final analysis, students, faculty and staff at community

colleges and universities may benefit from the substantially less complex model provided.

Evaluation of the Model

The ultimate test for the articulation model is the extent to which transfer activity is increased and reduced in complexity as a result of its implementation. As suggested in Florida (1988a:7), the model should be continually evaluated on a periodic basis. These evaluations should be designed to determine the extent to which barriers to interinstitutional course and credit exchange have been eliminated. Such evaluations should also be geared toward identifying other articulation problems, and promoting the community college transfer function.

Rationale. Authorities in the area of articulation suggest that effective articulation/transfer programs require extensive evaluation and review to ensure effectiveness. Additionally, the most successful programs found in the literature include a method of periodic evaluation and provisions for upgrading when needed. By providing feedback on the successes and failures of various components of the model, information needed to refine it will be available.

Chapter 5

INTERPRETATION, CONCLUSIONS, AND RECOMMENDATIONS

Interpretation of Results

Key administrators of the Tennessee higher education establishment are in a unique position to observe and influence needed change in issues related to improving articulation relationships between two- and four-year institutions. The literature and current trends in the SBR are in close alliance with the idea that a uniform articulated program of interinstitutional course and credit exchange is desperately needed to improve educational practice in the state. Higher education professionals in many states across the nation have recognized this need, and have embarked upon programs designed to mitigate the problem. The problems resulting from the lack of interinstitutional cooperation on matters related to articulation are widespread, and affect almost every higher education institution and system in the country. The SBR system in Tennessee is not an exception, but rather it is another example of a system entangled in the web of curricular fragmentation and pedagogical territorialism.

Higher education reform in the area of articulation and transfer is on the national agenda, and activities

related to these issues are expected to increase. The expected increased attention to articulation matters is due to the recognition by many that it is no longer confined to the exclusive domain of academics. Today articulation matters encompass a broad range of academic, political, economic, and social issues that command the attention of a much wider audience than before. When reduced to its most basic function, articulation issues directly affect the extent to which higher education is accessible to every person who might benefit from it. Recent statements made by the Chancellor and other members of the SBR have been interpreted to indicate that there is great concern within the system about transferability of courses and credits. In Tennessee, articulation concerns are currently being reflected in SBR-mandated mission changes for Tri-Cities State Technical Institute (TCSTI) and Nashville State Technical Institute (NSTI). The Chancellor of the SBR announced at the December quarterly meeting of the Board (SBR Meeting, 1988) that the missions of these institutions were being expanded to include programs designed for transfer. He further stated that, in the case of NSTI, the expanded mission statement would not be approved until an articulation agreement has been finalized with TSU.

Articulation issues have prompted intervention by extramural bodies, including state agencies and legislatures, interstate commissions, and private foundations. The State of Florida has legislated and continues to legislate a

multifaceted secondary-postsecondary articulated system that ranges from common course numbering to resource sharing to systemwide data gathering. Additionally, the States of Alabama, Arizona, California, Colorado, Wyoming, and South Carolina are among those that have taken steps to improve the articulation and transfer process through initiatives that are statewide.

An intensive review of the literature was conducted to determine what other states, institutions, and systems of higher education have done to mitigate the problems resulting from the lack of uniform articulation agreements. The literature review also included studies and articulation related research conducted by higher education authorities, and documents currently being used. Additionally, telephone and personal interviews were conducted to obtain specific information relative to articulation in individual institutions within the SBR system. A cross-case analysis of the general education core curricula of MSU, TSU, and SSCC was conducted to determine commonalities and differences among these institutions.

It was found in the literature review that several states and systems of higher education have initiated successful uniform articulation agreements and programs. It was also found that the subject of articulation is complex and broad, cutting across all aspects of education from curriculum development to student services. Overall, it was concluded that Florida has in place a plus-two articulation

system that is second to none. The range of articulation processes and relationships were found to be comprehensive, functioning effectively, and worthy of replication.

The results of the telephone and personal interviews conducted with personnel at MSU, TSU, and SSCC were extremely significant. These interviews not only resulted in needed clarification on elements of the general education core curricula, but also verified a willingness among personnel at these institutions to cooperate in articulation initiatives. As suggested by many authorities on interinstitutional articulation, an attitude of cooperation, and respect must exist among those individuals and institutions responsible for making articulation work. These findings were interpreted to indicate, therefore, that the idea of systemwide articulated curricular programming is an idea whose time has come in SBR.

The cross-case analysis of case records on MSU, TSU, and SSCC were interpreted to indicate that more similarities exist among these institutions than differences. The cross-case analysis also resulted in the finding that all of the institutions agree on seven specific disciplines as comprising the general education core curriculum for programs leading to the baccalaureate degree. Differences were found, however, in the amount of credit hours required in each subject, and the discipline to which some courses were assigned. Overall it was found that all three institutions' general education core curricula are the same with respect to

purpose, content, and scope. These findings were significant in that only minor adjustments in the general education core curricula are needed to successfully implement the model derived in this project. Coupled with the fact that all SBR institutions operate on a semester academic calendar, common student information system software, and share common curricular perspectives, educational practice could be significantly improved by utilizing the model proposed in this study.

The fragmentation that was found to exist across the general education core curricula was consistent with the findings of authorities who have studied intensively the articulation process. Additionally, the lack of standardized mechanisms by which to handle transfer courses and credits was consistent with the findings that led to the development of articulation programs in several other states. Taken together, these findings may be utilized to bring focus to an area of higher education management in Tennessee that is destined for numerous discussions and improvements in the months and years ahead. Invariably, these discussions will most likely center around implementation of initiatives similar to the Articulation Model derived in this study.

Conclusions

In reviewing the numerous documents emanating from state commissions and agencies, higher education institutions and systems, and higher education writers, one is struck by

the frequency with which their authors conclude that the single most promising strategy for reducing transfer barriers is uniform articulation agreements. Most of the literature contains information that reflects this same finding whether their authors write from the perspective of the two-year college, the four-year college or university, a university system, or a state coordinating agency. Conclusions in this major applied research project are consistent with the conclusions of these authors.

Suspicions about fragmentation in the general education core curricula across SBR institutions were substantiated by the findings of the cross-case analysis. These inconsistencies were further verified through telephone and personal interviews with staff at MSU, TSU, and SSCC. It was concluded that, while the elements of the general education core generally agree, there exists sufficient disagreement and fragmentation to cause concern. These points of disagreement have a potentially serious negative affect upon the ability of a large population of students to achieve their educational objectives. It was also found that neither MSU or TSU has devised and implemented strategies designed to promote transfer within the SBR system.

The above observations and findings make it patently clear that there is a need for: (1) a uniform systemwide articulation model, (2) a set of policies and procedures for the treatment of courses and credits in transfer, and (3) computer-assisted articulation processes designed to assist

in transfer credit delivery and evaluation. Additionally, it is obvious from the literature that interinstitutional cooperation is essential for the model to function effectively. In this regard, an articulation task force should be formed for the purpose of finding strategies to implement and evaluate the model.

The Articulation Model between SSCC, TSU, and MSU was based in part on existing elements of the general education core curricula, SBR policy, and systems currently in use in Florida. Recommendations, strategies, and opinions of other authorities on articulation processes were also utilized. Great consideration was given to protecting the integrity of the general education core curriculum while at the same time incorporating the essential tenets that articulation agreements are designed to address.

Most authors agree that the essential groundwork for increasingly effective two- and four-year programmatic and institutional relationships have been laid through the mechanics of articulation. A uniform articulation model is therefore an excellent conduit through which to achieve creative cooperative improvements in educational practice. In this regard, it may be concluded that the implementation of an articulation model, such as the one derived in this study, is a precondition for such interinstitutional relationships and practices. It may also be concluded from the findings of this study that all of higher education in Tennessee stands to gain from a uniform articulation model.

Recommendations for the Improvement of Practice, Including Strategies for Diffusion, Implementation, and Improvement

Based on results of the literature review, telephone and personal interviews, and the cross-case analysis on MSU, TSU, and SSCC, the following recommendations are offered to the State Board of Regents:

1. Adopt the Articulation Model derived in this study, including common course numbering, and mandate its use by all SBR institutions.

2. Appoint a Task Force on Articulation comprised of key personnel from selected SBR community colleges and universities to conduct further study and devise strategies to implement and improve the Model.

3. Appoint a Task Force to develop specific policies and procedures for implementing computer-assisted transfer credit processing.

It is believed that if these recommendations are implemented, the articulation process and educational practice within the SBR system will be greatly enhanced. By implementing the Model proposed in this study, it is expected that students, faculty, and administrators will benefit. Additionally, the State of Tennessee is expected to benefit from the savings on per student costs related to poor or lack of articulation.

Results and recommendations of this study will be shared with the President of SSCC, the academic vice presidents, deans, and other personnel who contributed to this study. The results and recommendations of this study will

also be provided to the various state agencies that indicated an interest in receiving them.

As previously indicated, the adoption and ultimate implementation of the Articulation Model derived in this study is a prerogative that rests with the SBR. However, members of the SBR have always demonstrated a commitment to the improvement of educational practice, accessibility, and diversity. At the very least, it is expected that members of the SBR will give more than a mere cosmetic glance to the articulation model herein provided.

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BIOGRAPHICAL SKETCH OF STUDENT

Frank B. Heard was born on March 9, 1945 in Roanoke, Alabama. He is a Vietnam-era veteran of the U. S. Navy who served in active duty personnel administration, and later in U. S. Naval Reserve Intelligence. He holds a Bachelor's degree in Business Administration and Economics from Morehouse College, and a Master of Business Administration degree in Management and Organizational Behavior from The Atlanta University. His career in higher education includes positions as University Registrar, or Dean/Director of Admissions and Records at universities in the States of Ohio, Missouri, North Carolina, and Tennessee. Currently serving as Dean of Student Affairs at Shelby State Community College with administrative responsibility for six major sub-units, his duties also include direct responsibility for affirmative action enforcement. Heard is an alumnus of the Leadership Memphis Class of 1987, and the University of Tennessee Institute for Leadership Effectiveness Class of 1986. His extra-curricular interests include reading, travel, and jazz and classical music listening. His professional goals include ultimately assuming a higher position of leadership within the postsecondary education environment.

I certify that I have read and am willing to sponsor this Major Applied Research Project submitted by Frank B. Heard. In my opinion it conforms to acceptable standards and is fully adequate in scope and quality as a Major Applied Research Project for the degree of Doctor of Education at Nova University.

(date) Barton R. Herrscher, Ed.D.
MARP Advisor

I certify that I have read this Major Applied Research Project and in my opinion it conforms to acceptable standards for a Major Applied Research Project for the degree of Doctor of Education at Nova University.

(date) Charles W. Collins, Ed.D.
Local Committee Member

This Major Applied Research Project was submitted to the Central Staff of the Programs for Higher Education of Nova University and is acceptable as partial fulfillment of the requirements for the degree of Doctor of Education.

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